AUTOGRAGH OF GEO. BROWN.

Mr John Bell To Geo. Brown

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	For John & Thomas Bell 7 weeks	14	
	For Wm & George Bell	13	
	For James Bell	6	6
	£	1	13 6

Decem.r 12.
1803. Received payment

1804. Jan.y 7. By Cash
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22 JY 63

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George Brown, the author of the following pamphlet, was a Native of Newcastle, and younger son of Joseph Brown, a poor but honest working Man in that Town, who had received from his parents an excellent Education, and possessing considerable mathematical ability, was sought after by Hutton, Congleton and the other geniuses in Physics, of that Day:- He had however one failing, i.e. the love of liquor, and Company; which together, with a large family, kept him through life, in poverty:- His son George, at a very early age imbibed some of his fathers Mathematical Talents, and having in consequence of a fall, had what was termed a white swelling in his left knee, after years of suffering, had his leg taken off at the Newcastle Infirmary by the celebrated Surgeon, Ingham:- His remarkable fortitude in this occasion & long suffering, gained him the notice and friendship of several of the faculty, and amongst others of a Dr. Smith, who about the year 1780 was resident in Newcastle, who had Brown sent to School at his (Dr's) expence:- When little more than 15 years of age he commenced writing in the Diaries and other mathematical Works, and about the year 1786 (then being in his 17th Year) he, at the request of some friends, commenced School, in a small room adjoining the Cordwainers Meeting

House

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House, which at this time was situate near the North Door of Saint Nicholas Church:- a clumsey isolated Building, which was partly occupied as a Dancing School by Jere Gregg, and partly as a Weigh House:- Here Braun struggled on, for a few Years, making little more than what paid for his Rent and the few stools and Benches he required; His pupils at length increasing, the room he occupied became too small, and he took one about the middle of Denton Chare of Matthew Bright (afterwards Sheriff) where he remained until the Year 1790 or 1 when he was persuaded by the late Benjamin Brunton, Brewer, to remove to Howdon Pans, where a person, capable of teaching Navigation was then particularly wanted; here he remained about two Years, but politics at this time running high, and getting himself engaged in a controversy, with some of the then Admirers of Paine, whom he determined to oppose; they resorted to so many low and vulgar ways of persecuting and plaguing him, that he removed back to Newcastle. about the time the Rev? John Parkin (many Years Curate of Saint Johns) gave up the School in which he had taught in the Black Horse Entry in Newgate Street. Braun applied for and took this room, and continued in it until the Year 1811 or 12 when his Landlady threatening

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threatening to advance his Rent to a Sum, Brown thought the School did not deserve, he removed to a more convenient one opposite to the Newgate, part of the premises belonging to the Revd. — Huntley, and then held on Lease by Thomas Walker: — Huntley soon after wards sold these premises to Moore, the Owner of the adjoining public House, and Brown as a convenience to his new Landlord removed further down the same Court where he remained until the premises were sold by the Assignees of Moore (who had failed) to Walter Elliott Blacksmith, when Elliott wishing to rebuild the front House, Brown removed his School to the premises he had purchased adjoining the Town's Walls, since called the West Wall Cottages. —

Brown first commenced Author in the year 1796 when he published at North Shields (being then resident at Howden pans) the following pamphlet, intituled: — "Philosophy no Friend to Atheism": a work of no great merit, but displaying the eccentric views of the Author. and now of considerable rarity. — In 1806 he published in Newcastle "a Treatise on Navigation", divested of the more abstruse Rules, and rendered easy to most capacities, a work of pages, Royal Octavo, which he sold at 5ˢ. each.

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each.— In the Year 180 , he commenced the Tide Table and continued publishing it regularly, until the Year :— He also calculated the Tide Tables inserted for many years in the Newcastle Chronicle and Tyne Mercury Newspapers, and also that which was annually published in the Newcastle Memorandum Book.—

In the Years 1810 & 1811 he taught the writer of this, several Branches of the Mathematics, but being, early in 1812, — threatened with Inflammation in the Stump of his Leg, he was obliged to desist from going to private Houses, to teach, and confine himself to his School, from out of which he was seldom seen afterwards, save on a Saturday or Sunday :— He latterly attended the Unitarian Chapel, but as he said, more from respect to Mr Turner (the then Minister of that Chapel) than from admiration of his peculiar Doctrine.—

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Joseph Brown (the parent of George), was the youngest Son of Robert Brown of Newcastle by Jane his Wife; and Nephew of the Celebrated 'Capability Brown'.— His parent was of a respectable Presbyterian Family in Newcastle, and at one time in good circumstances, but who became impoverished, by the increasing necessities of a Family of eighteen children, which he had by two wives;— Joseph was his youngest Son and intending him for the 'Ministry' he received an excellent Education, but figures being his 'forte' he became at a very early age, an able Mathematical Scholar; He, having an utter aversion to the profession his father intended to bring him up to, — ran off and went to Sea, where he remained several Years:— On returning from a Voyage, he in his usual thoughtless manner, married & became the parent of ten children:— & struggling in poverty he imbibed that love of liquor, which kept him in a humble situation thro' life:— falling out of employment as a Seaman He engaged himself as a Keelman & was for a number of Years thus employed, until his increasing infirmities and Age, rendered him incapable of it:— He lastly 'did any thing he could' worked hard

tho'

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thro' the Day, and taught a few Young Men 'Mathematics' in the Evening, but for the latter never received much, save 'a sup of Drink!' — He was notwithstanding much sought after for his Mathematical attainments. —

This Son George met with the Accident, which occasioned the loss of his limb, whilst jumping with some of his Comrades, when 12 Years of Age: — He first applied to Mr Abbs, the Surgeon, who then had a Shop in the Pudding Chair, who told him it was only a 'Sprain' and that it would be soon well: — He however was wrong & after the Doctors had worked on with it for nearly 6 Years, he was recommended to get in to the Infirmary and have it amputated, which he was enabled to do, thro' the kindness of Vicar Ellison, he (Brown) being then, in his Sixteenth Year: — Mr Thomas Ellison first sent him to School to learn a better hand, than he wrote at that time, and he went to the celebrated Mr Scott, of the Back-Row, who was at this time in great repute as a writing Master: — Whilst with Scott, he assisted him materially, in examining the proficiency of his pupils in Figures & became a favourite with his Master, who soon afterwards recommended him to Mr afterwards the Reverend Joseph Simpson, who then taught a

School

School at the Head of the Old Butcher Market in Newcastle, (he being then in want of an Assistant) as a person well qualified & be of use to him in the Mathematical Department of his School:— This Recommendation was strengthened by those of the Rev. John Brown and the Rev. J. Hogarth, but Brown failed in his Application, Mr Simpson thinking him too Young; And he (Simpson) engaged James Potts, a Young Man who had recently come to Newcastle, from the neighbourhood of Haltwhistle:— Potts shortly after left this situation for one he obtained in the Commercial Bank & Simpson removed from Newcastle to Tanfield, where he commenced a Boarding School, in addition to the Curacy of that place:— Brown's future progress in life is stated in the preceding pages.—

ex Information Geo. Brown, April 1823.

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ADVERTISEMENT.

This Day is published, Price One Shilling,

PHILOSOPHY NO FRIEND TO ATHEISM;

OR, THE

Certainty of a First Cause impartially investigated.

By G. BROWN, Mathematician.

North Shields: Printed by W. Kelley; and sold by Messrs Charnley, Whitfield, and Chilton, Booksellers in Newcastle.

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NO

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CERTAINTY OF A FIRST CAUSE

IMPARTIALLY INVESTIGATED.

By G. Brown, Teacher of the Mathematics.

Hope springs eternal in the human breast;
Man never is but always to be blest:
Trace nature's walks, shoot folly as it flies,
And catch the manners living as they rise;
Laugh where we must, be candid where we can,
But vindicate the works of God to Man.

POPE.

NORTH SHIELDS:

PRINTED BY W. KELLEY.

1797.

BRITISH MUSEUM

THE

AUTHOR'S ADDRESS.

IMPREST with a generous ſympathy for the preſent and future felicity of man, eſpecially thoſe poor eccentric creatures, labouring under the mortifying notion of atheiſm; induce me to lay this ſmall performance before their inſpection, hoping it will convey ſome ſignificant facts of eternal conviction to their ſouls, and rouſe the minds of ſuch as have long been ſlaves to brutality and wickedneſs, to the divine pitch of heavenly meditation. Was the exiſtence of a ſupreme being univerſally credited, my attempt in the vindication of one, might have been deemed preſumption; but ſenſible I am, that there are too many who keenly abominate the veracity of this glorious truth; and ſhould this production make any viſible change in their minds, and deportment, my labour is abundantly repaid. Men who have long perſiſted in licentious rebellion againſt their own reaſon, and made themſelves the common jeſt of the world; by openly profaning the poſitive precepts of the divine law, wiſh there was no God to inflict eternal puniſhment upon them, for the numerous inhuman immoralities they have been guilty of. But ſuch ought to conſider, that a timely reformation followed by a life of active virtue; will not only recommend them to the favour of the deity, but even render them triumphant over the ſtings of death,

whoſe

whoſe approach imprints a different bias on the moſt obdurate heart.

Epicurus, the primitive leader, and greateſt of bully atheiſts, died an eminent coward in thoſe things he ſtrenuouſly reprobated, nothing terrified him more than death, and the God he denied: It is very evident, that every atheiſt muſt promiſcuouſly mingle with undiſtinguiſhable matter, not merely for want of nouriſhment, but becauſe death is an unvoidable injunction enjoined upon the human race.

To riſe ſuperior to the ſilly vanities of life, and to look with contempt on the brutiſh converſation of deſigning men, diſcovers the ſublimity of a noble mind, and what are our moſt pleaſing amuſements here, but flattering deluſions, every unmanly action is only another additional impulſe, to ſhorten our preſent exiſtence, and to puſh us from our proper ſphere of action. Nothing is wanting to compleat a favourite heir of heaven, but honeſty and a holy life; therefore let us devote ourſelves to the ſervice of true holineſs, and the inveſtigation of uſeful knowledge; ſuch a ſoul impreſt with the internal feelings of charitable benevolence, and adorned with the moral duties of life, ſhall conquer the greateſt oppoſition.

Philoſophy, the full power and everlaſting monitor of God, ſhall rouſe the human mind to a lively ſenſe of its preſent dangers, and ſpread the ſpotleſs leaf of liberty from pole to pole. In order to obtain a glorious end, we muſt endeavour to demonſtrate the poſſibility of attaining it; and while the proſperous gales of ſucceſs blow, let us with dauntleſs courage advance to our primitive good. Since nothing can be predicated concerning man, till he is brought into exiſtence, nor can the divine law have any power a-

gainſt

gainſt him, till he has tranſgreſſed the moral; therefore, this naturally leads us to enquire, what reſtitution is neceſſary, that we may obtain the mercy of God, and the bleſſings of futurity. Every creature on the face of the earth, may embrace the free mercy of God, and thoſe who are not well aſſured of it in this world, are greatly miſtaken, if they think to obtain it in another; Becauſe the mercy of the deity can only extend to creatures during their ſtate of human probation, nor is there any aſpiring hope in a future exiſtence, becauſe there the ſoul loſes the perception of every thing, except the feeling of its own ſituation, and were the deity merciful to man, both here and hereafter, he would not be a judge of equity, for a God of all mercy is a God of injuſtice.

Now, O atheiſt, let us reaſon together; doth thou believe in God? No. Why? Becauſe I neither can, nor ever had any demonſtrative proofs of his exiſtence. But art thou a ſcholar qualified to demonſtrate the nature of thoſe things which thou knoweſt do really exiſt? No. Well then believe in God, and live a ſober life, for thy longeſt happineſs is in this world. Once more, Mr Atheiſt, and I have done with you; I would know if you have any deſire for a God? No. Why? Becauſe I have been ſo long a rebel to my own reaſon, and committed ſo many wicked actions, beneath the moral dignity of man, that I know if there is a God, he muſt be juſt, and ſhall puniſh me.

Euclid informs us, that a line has length, but no breadth, which the atheiſt mightily endeavours to explain, by aſſerting that a line muſt have ſome viſible breadth, infinitely ſmall: But when I told him that the

the earth deſcribes a limited path, or curve line round the ſun, and leaves no viſible traces behind; it ſtruck immediate conviction in his heart, and the ſunſhine of glory beamed from his eyes: Ah! me, he exclaims, ſince reaſon has deceived me all my life, even in the ſecond definition of Euclid, how far muſt I be deceived with reſpect to the being of a God, and the phyſical operations of nature.

Howdon-Dock. G. BROWN,

22 JY63

SECTION I.

OF

REASONING.

THERE is treaſured up in man an inexhauſtible fund of knowledge, which lies dormant, liſtleſs, and unactive, till ſome powerful agent impels it into motion, in purſuit of thoſe ſubſtantial realities for which it is originally deſigned; hence point out a valuable acquiſition, and the means of obtaining it: the reaſoning powers immediately imbibe the exhilarating proſpect of attainment, and the certainty of the conqueſt is ratified from an eager determination to conquer.

It is an indiſputable fact, that man is endowed with a vaſt profundity and an infinite variety of invention, which renders him unlimited in his organs of ſenſation, and powers of recollection; and at once demonſtrate, that he is ſtill capable of arriving to higher degrees of knowledge and bleſſedneſs than he enjoys at preſent; which could not poſſibly be, were his ideas ſtinted to particular objects, and his capacity only fitted to comprehend certain emoluments of pleaſure, and diſtinctions of literature. How far the human mind can go in its acquirements of knowledge is indeterminable; but it is obvious, that we doubtfully advance onward, from lower, to more glorious monuments of truth; and every revolving ſun preſents different proſpects of improvement, worthy of our imitation and attention.

To ſtimulate the indolent mind, and inſtruct in the elementary duties of life, we muſt patiently point out to it examples of ſimplicity and entertainment, uſing proper methods of inculcation and diſcipline, ſuited to its genius and capacity: it being by imitation, and frequent application to the ſame things, that we at firſt acquire knowledge; and the greater number of objects exhibited to our view, the more our mental faculties are enlarged, to underſtand and expreſs the meaning of ſimilar objects of a more important ſignification. By this means we ſoon conquer the ſallies of the mind, and feel an innate averſion to what is poiſonous to the body.

When the ſeeds of virtuous principles are carefully ſown in the breaſt, the mind gradually opens to conviction, riſes ſuperior to the littleneſs of the vulgar, and ſoars to the fountain of perfection, on the wings of induſtry; to a ſoul thus decorated, with all the intrinſic accoutrements of knowledge; the eccentric deluſions of atheiſm vaniſh before it like the ſhadowy enjoyments of a dream. How intereſting is the diſcovery of truth, and how deep its impreſſion on the ſtudious mind; here we unfold the evidence of things as they are; not as the atheiſt would have them; trace the deity on the plain path of mathematical demonſtration, till he becomes viſible to the ſoul of man: As the ſun's attractive force retains the rolling canopy of heaven entire, ſo the God of nature unlocks his repoſitory of truth, and infuſes animation into the philoſophic breaſt. Truth is ever conſiſtent with our natural deſires, and the improvement of it is always accompanied with the higheſt pleaſure, the moſt endearing ſatisfaction, and the profoundeſt encomiums. No method of enquiring after it, can in any meaſure be compared to an intenſe perſeverance of nat[illegible] philoſophy

philoſophy; the propoſitions adduced from thence, being infallibly true: to contemplate on the ceaſeleſs union of eternal things, and conſide in the great inviſible being that actuates the whole, beautifies the rational mind with never fading good: By reaſoning methodically and inveſtigating analytically, we detect marvellous truths inveſted in the grand ſcheme of univerſal creation; trace nature out of her concealment, erect a little kingdom of heaven within us, and live congenial of the divine nature. Here the atheiſtical diſputant may converſe with objects boundleſs as his own deſires, and diſcriminate the ligible characters of him whoſe infinite omniſciency is copiouſly diſplayed, in the complicated but accurate adjuſtment of things. As we are capable of perceiving what may, or cannot poſſibly exiſt, we ought cautiouſly to embrace the truth, permit nothing to ſeduce us from the love of it; and let reaſon and obſervation prevail, rather than diction and diſcipline: Man was never created to live by credulous probabilities, nor to depend upon attaining conſummate felicity, through the artful inſinuations of vagrant craftſmen: No, we were created to procure the favour of God, and it is beneath the dignity of a noble ſoul, to be the gewgaw for another's paſt time.—Though phyſical truths are not ſtrictly attainable, yet they do not infinitely ſurmount our niceſt calculations, for from a mathematical computation, it appears, that we even as nearly approximate their truths, as near as we can aſcertain the circumference of a circle whoſe diameter is given, which cannot be accurately adjuſted till we know exactly the proportion the diameter has to the circumference; hence appears the inexpreſſible excellence of the mathematical ſciences, and their great utility, when rightly applied

plied to phyſics, which is the foundation of practical mechanics, and the leading principle whereon all machinery hangs. But if we do not perceive that the omniſciency of the great inviſible creator of the univerſe is abſolutely indefinite, that his perfections preclude all abbreviation, and that his darling attribute is univerſal benevolence, and man's prerogative to imitate it, it is impoſſible to remove the ſtupidity of atheiſm without a miracle, which according to the nature of things cannot be expected, by reaſon of the mathematical ſciences, and the operations of nature, harmonioufly ſinging together, and ſtrenuoufly maintaining the infinite omnipotence and goodneſs of that being, whoſe exiſtence we ſafely infer from the methodical arrangement of his wonderful works created, and the near approximations we make to them, by means of a mathematical inveſtigation.— We do not predict the eclipſes of the luminaries, and their alternate revolutions by gueſs; no, we have precepts founded on the firm baſis of geometrical demonſtration, which enable us to make ſuch eſtimations, as practically agree with the rotation of the material wheels of time. Thus far, the enquiries of men unite with the wiſdom of the deity, manifeſted in the ſcheme of creation, and elucidate, that he is in reality, what we perceive him to be; viz: A being of unlimited omniſciency and power. Now, thou, oh! man, if thou perceiveſt not the exiſtence of an intelligent creator, with a philoſophic eye view him in every creature in the univerſal creation, the fowls of the air ſing to his praiſe, and the elements of heaven join chorus together, theſe are the preachers of truth, they ſtrain not their little throats for intereſt; nor premeditate their ſongs to pleaſe a thoughtleſs crowd. But the perpetual palpitations of the heart

heart being continually beating onward to ineffable glory, is a more poſitive indication of God's tranſcendent dignity; theſe pulſations eternally throbbing in the human breaſt, are more indulgent to a virtuous man, than the moſt ſalutary food to his appetite; he is not like the guzzling epicurean, who praiſes the novelty of the diſh, not the hand that ſent it; nor the zealous enthuſiaſt, whoſe deluſive emurmurations, and the painful apprehenſions of futurity, often drive him to horrid inſanity or ſuicide: But like a perſon conſcious of his own merit, prudently elucidates whatever comes within the ſphere of his own cognizance, lays down certain concluſions, deduced from practical obſervation and actual experiment; readily admits a reaſonable propoſition, rather then reject it. Again the huge champions for atheiſm not only renounce in their hearts the reality of a God, but forcibly reprobate the evidence of moral diſtinctions; whereas there is nothing more obvious to man, than that morality is as capable of demonſtration, as any propoſition in the mathematics, or the elements of Euclid; and were I to attempt the illuſtration of a moral axiom, it would be deemed preſumption; becauſe the knowledge of ſuch truths are as well known to us, as if they had been originally written in our minds; for we no ſooner read or hear them, but they immediately impreſs conviction on the prime function of the ſoul. Of all creatures in the univerſe; an atheiſt is moſt deteſtable, his deportment is intolerable, his immoral practices are infinitely beneath the dignity of human nature; he not only renders himſelf odious to the impartial judgement of infinite wiſdom, but a monument of pity to common ſenſe; this he knows to be his real condition from the perception he has of right and wrong, and

the

the natural duty incumbent upon him, to do the one and not the other. He will not ſubmit to amendment, leaſt it be ſaid, the ingenuity of ſome good work has been the inſtrument of producing an effectual reformation in his life and converſation.—Whatever opinion men profeſs to hold as a genuine truth, ſurely a virtuous life is moſt preferable and commendable, it is only this that can make us ſhine both here and hereafter, like the brightneſs of the natural ſun in his meridian ſplendour; thus, virtue ſhall conquer death, and triumph victoriouſly over beelzebub the prince of atheiſts. When we ſeriouſly reflect on the dreadful conſequences of an ill ſpent life, how gloomy is the conſideration, we then begin to wiſh to die the death of the righteous, though we ſeldom think of living ſuch, till we are floating on the brink of ruin. Since then reaſon purſued is faith unconfined, and virtue here, is glory in futurity; let us live righteouſly, and ſoberly in this world, which is all that either God or man can require of us; ſo ſhall we die the death of the righteous, and conclude our latter end in peace.

God alone is only to be feared, becauſe of the unparalleled ſtrictneſs of his juſtice, and the impartiality of his faithful injunctions; but man is always to be dreaded as an enemy, on the account of intereſted motives, and the duplicity of his heart. Our intellectual powers of preception are not omniſcient to foreſee the danger of future events, and to detect the hypocriſy lurking in the human breaſt; could we pry into the hidden myſteries of nature, and find out the real properties of the cauſe, whereby the uniform courſe of things are regulated, we ſhould no longer baſk in the ſhades of ignorance, nor deſignedly endeavour to fully the ſimplicity of truth. But we have

have not as yet, any probability of ever obtaining a ſatisfactory ſolution to the interior union of matter with its component parts, nor ſhall we ever be qualified to unfold the truth of philoſophical enquiries with accuracy, by reaſon of the imbecility of our underſtandings, and the want of proper inſtruments to diſtinguiſh the eſſence of infinity. Though man in reality be an emblem of his creator both in body and mind, yet his knowledge falls infinitely ſhort of the perfect omniſciency of the deity; and it is perhaps the narrow confinement of the ſoul in its material body, that contracts the faculties of man, and keeps him inſenſible of inherent qualities. There is a motive principle of action or gravitation in matter, the properties of which are beyond the reach of our comprehenſion, that it ſeems to be the divine energy of the almighty, agitating and pervading every finite ſubſtance in the univerſe, is moſt probable when we conſider, that whatever principle that is which acts of itſelf univerſally, muſt be omnipreſent to, and omniſcient of all things, not that the deity is, or reſides in matter, but that his knowledge is preſent with, knows, and comprehends the properties eſſential to all created ſubſtances. To ſay, that God acts from neceſſity, is putting a limitation to his omniſciency, which is abſurd, for infinity precludes all diviſion; and infinite knowledge being eſſential to God alone: (Whether God does, or does not act from neceſſity, we have no idea,) neither can we infer any from analogy, becauſe infinity to us is abſolutely boundleſs, and incomprehenſible. Moſt of us are agreed, that God perceives and knows all things, but the manner how, we are as ignorant of, as a blind man is of colours. Here the metaphyſician may employ his reaſon till he loſe it, and the atheiſt triumph in his

In the former part of this Work the Author declares God is omniscient here he says he cannot tell whether he acts from necessity or not would thank some of his Friends if the Author cannot to explain the above contradict

his opinion, till he begins to totter into the fathomleſs ocean of infinitude, then he invokes the aſſiſtance of a ſupreme Being with a feeble voice.

To deny the evidence of incomprehenſible truths, merely from no other motive than ſome ſeeming impoſſibility being interwoven in their modus, is to admit of no truth, but what comes within the reach of human reaſon, which hypotheſis is entirely erroneous, for all our valuable diſcoveries in philoſophy, are derived from practical obſervation, and experiment, which reaſon alone could never have poſſibly ſuggeſted; and are there not many things in the mathematical ſciences, whoſe great utility we are conſcious of, as equally indemonſtrable as the being of a God? Since therefore, there are a variety of facts both in mathematics and natural philoſophy, which far exceed the ſagacity of the moſt acute reaſoner, is it not highly criminal to abominate the precepts of infinite wiſdom? and to blaſpheme his moſt ſacred name; we believe, that the ſun is the centre of the univerſe; that the planets are inhabited with rational creatures; and that we know the pleiades, or ſeven ſtars, and that longitude has a real exiſtence, are theſe things demonſtrable or not? if not, why not believe in the great creator, whoſe omnipotent arm upholds thoſe maſſy globes? To reprobate whatever has a reſonable pretence to promote the felicity of man, is certainly dangerous; we all naturally wiſh for happineſs, therefore let us indulge the deſire; freely cheriſh the internal operations ariſing in our breaſts, for nature always proceeds in the ſimpleſt manner, and produces effects conductive to ſome ſalutary end. Hence, let us lay aſide every bias and prejudice that may ſeem to counteract them, peremptorily reject metaphyſical notions, terms of whimſical opinions

and

and ſhawdowy diſtinctions. As no man can be eminent in any ſcience, till he is well acquainted with the rudiments whereon the application of that ſcience depends; ſo no man can be fully ſenſible of a ſupreme being, till he reads the plan of creation, and underſtands it; here his mind is enlarged, gradually imbibes the ſimplicity of truth; and learns never to yield conceſſion to any propoſition, but where the evidence is ſufficiently intelligible to produce full conviction. Thus, reaſon and philoſophy conjointly agree, to elevate our devotions to the great God of heaven; and are as inſeparably connected as the union of the ſoul in the ſame body, which nothing but death or mortality can burſt aſunder. Reaſon implanted in man, ſeems to be the vice gerent of the almighty, to direct him in the knowledge of temperance, juſtice, honeſty, and prudence, and to prepare him for a better world. But it is one thing to be endued with reaſon, and another to apply it to good purpoſes; here lies the dignity of man, the benefit of the ſoul, and the utility of a future felicity.

Philoſophy depends on reaſon, to inveſtigate the validity of a firſt cauſe, and when both acquieſce together, they immediately abandon the mortifying notion of atheiſm; and plant the eternal God of ſpotleſs purity in the ſoul of man. Reaſon may deceive us, but philoſophy cannot, it is truth itſelf; therefore, we ought to be cautious how we imbibe opinions; for philoſophy the plenipotentiary of heaven, ſhall in ſpite of fame, convert the human race to genuine love, and utterly efface the dumb monuments of blind ſuperſtition; then ſhall conquering heroes join, to celebrate the praiſe of their

great victorious king, and recount the triumphs of golden trophies won.

For a man to know that there is a God, he muſt indulge the deſire he has for one, there being no effect without a cauſe; and the univerſality of the effect, confirms the veracity of the cauſe, hence, it is evident, that we all naturally wiſh for happineſs; and every rational creature knows, that true happineſs is not attainable in this world, becauſe in whatever ſtation we may be placed, we are ſtill capable of wiſhing; conſequently then, there muſt be a place of real felicity, where the ſoul ſhall be perfectly happy, and loſe the ſenſe of every thing but its own enjoyments. Seeing then we have ſo ardent a longing after immortal happineſs; we cannot help believing its exiſtence; and frequent meditation on ſuch divine things, engraves on our memories what we wiſh to know, viz: that there is a God.

SECTION II.

OF

LIGHT.

AS the contumacious mind like the boiſterous ocean, requires frequent leſſons on rectitude and philoſophy, in order for its production of genuine utility, and its advancement of future excellence:— It is certainly commendable to accuſtom it, occaſionally

ally to valuable and intereſting ſpeculations, as ſoon as it is capable of diſtinguiſhing right from wrong, truth from falſehood, and can readily aſſent to the veracity of an axiom, without reaſoning upon it; this will not only wean its affections from theſe prepoſterous fopperies and follies to which it is liable to, from imitating the perfidious glare of the world; but lead it progreſſively forward in the proper purſuits of ſolid learning and endleſs improvement. Such an early attachment to enquiry, will form in the mind a habit of cloſe reaſoning, corroborate the judgement, and gradually lead to perfection.

Syſtems of moral and natural philoſopy, properly adjuſted, and accurately delineated, not only teach us the duties of ſocial unanimity and benevolence, but alſo afford that heavenly ſerenity and peace to the feeling heart; which deſpotiſm cannot obliterate, nor atheiſtical opponents render abortive.

True philoſophy, ſays Plato, conſiſts more in fidelity, juſtice, conſtancy, ſincerity, and in the love of our duty, than in a great capacity: Hence, then, learn the neceſſity of poſitive injunctions to enforce practical obligations; and ſtudy not to diſpute as a philoſopher, but to ſhew a virtuous example; this expands the ſphere of man's felicity, and protracts the memory of human generation. To exerciſe ſobriety and temperance, and deal conſcientiouſly with others, is the ſubſtance of morality; but to do this and love the all wiſe diſpoſer of all things with perfect underſtanding, is the foundation of man's ſummum bonum. The moral and abſolute neceſſity of of man, are ſo nearly aſſimilated, that it is ſcarcely poſſible to diſtinguiſh the one from the other: But whatever opinion men may profeſs, ſurely this is moſt compatible, that no act of morality can be pleaſ-

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ing to God, which is repugnant to reaſon; for reaſon unconfined to external objects, will always aſcend to God, its original; it is the ſpiritual eſſence of bodies that attract each other, and not the bodies themſelves. For a man to perform the duties of life, with an intention of pleaſing both God and man, is hypocriſy, becauſe thoſe things which are ſeemingly pleaſing to man, may be highly criminal with God; nor can any man equally love two different objects at the ſame inſtant of time. But to negotiate diſintereſtedly, is moſt connatural to the juſtice of God; and will always recommend us to the favour of men; therefore the ſole object of our love is God alone, we are totally independent of any other. And ſince no man knows the preſent, paſt, and future thoughts of another; therefore no man can judge impartially of another; conſequently in every caſe, whether in acts of moral or immoral behaviour, we can only judge from what we know, to what we know not, and grant our final judgement of the actor, in proportion to the ſtrength of the evidence we know of, or laid againſt him.

Were we to ſay that God allures, or prompts us to evil, it would be the greateſt blaſphemy imaginable, and downright derogatory to his immutable juſtice; for, of all his perfections, goodneſs, and juſtice are moſt eſſential to his nature; and render him the moſt amiable, and excellent of all creatures to the reflection of man; in whom he has implanted perceptive faculties, capable of receiving any impreſſions, and conſequently of knowing good from evil. The commiſſion of evil is incompatible to reaſon, and quite repugnant to the nature of that which is truly good; if we have not ſuch a love for God, and a feeling ſenſe of future happineſs, as will conſtrain

ſtrain us from evil, we only believe in his name, and not in his immutable perfections. But thoſe men called predeſtinarians, vehemently maintain, that all the evil which they have committed, God laid it before them; and therefore they could not poſſibly avoid it; if ſo, then God has only given them an exiſtence in this world, in order to prepare them for a worſe; for, all evil tends to the deſtruction of the ſoul; conſequently, predeſtinarians are not predeſtinated to happineſs, but to eternal miſery. Moreover, theſe men alſo believe, that after God has permitted them to enjoy their luxuries and pleaſures, till like the prodigal's ſon, they have ſpent all; he warns them of their dangerous eſtrangement from him; makes them more zealous of good works, and fit to be partakers of the inheritance with the ſaints in light: Whereas it is nothing but a ſenſe of their own horrid actions, that convict them, and convey their blaſphemous petitions to heaven, imploring the deity to have mercy upon them, and to renovate their hearts, when at the ſame time he knows their wants, has changed their hearts, and predeſtinated them (as they believe) to everlaſting happineſs, antecedent to their exiſtence in this world: Oh! fools, and evil ſurmiſers, firſt ſhew a good act of charity from an honeſt heart; then ſhall your woollen-drapery garments be waſhed in Jehovah's univerſal blood, and your ſordid ſouls be ſecured from the black abodes of ſubterraneous fermentation. But God ſaid let there be light, and there was light.

Whether light be a luminous body of itſelf, or proceeds from ſome other body, no philoſopher ever yet has been fully able to determine; but that the latter is the caſe, ſeems to be the general opinion of the literati: Some compared it to the ringing of a bell,

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which by its vibration exites the atmoſpheric air without, and thereby produces ſound; but experiment prove, that there may be an emiſſion of light even in vacuum, by attraction and putrefaction:—for, if a piece of baize, or any nitrous ſubſtance be rubed in a dark room, light is inſtantaneouſly produced; and it is further obſerved, that when the ſea-water is ſtruck, it tranſmits light to a conſiderable diſtance; whether this be totally owing to the ſaline particles impregnated in the water, or to the great number of putrefied and nitrous bodies it contains is not certainly known, but very probably to both. Hence, it appears, that there may be light independent of air; but the ringing of a bell depends ſolely upon it, without which there can be no ſound.

Others again imagined, that light is a fluid ſubſiſting between fire and air, but this cannot be, becauſe, the above experiment demonſtrate, that there may be light even in vacuum by attraction.

Light is a material ſubſtance, proceeding from the ſun, and would be inſtantaneous to this earth, were it not for the interpoſition of the atmoſphere. It effects our organs of ſenſation, and ſtrikes other bodies in proportion to its fluidity.

The preciſe time that the fluid of light is in its paſſage from the ſun to us cannot be known, by reaſon of its rays being continually turned aſide from their rectilineal direction; as they paſs through the air to the earth after their impingement on the atmoſphere. But according to the moſt accurate philoſophy, it takes about ten minutes.

The human mind can ſcarcely perceive the amazing velocity, with which the rays of light are emitted from the ſun to us, each different ray having a different

rent and diſtinct colour, according to its different degree of refrangibility and flexure. One ray producing a violet, another an indigo, a blue, a green, a yellow, an orange, and the laſt a red. From theſe ſeven primitive colours all others proceed. All the rays of the ſun fall in perpendicular directions on the ſurface of the earth; and ſince the laſt, or red ray is the higheſt of colours, it has the leaſt degree of refrangibility and flexure, and is very viſible in the heavens, eſpecially at the riſing and ſetting ſun:—after the air has been condenſed during his abſence by night; and rarefied by his influence through the courſe of the day.

Since the earth attracts the rays of the ſun perpendicularly to its ſurface, it is evident, that thoſe countries which are in that direction under his effulgent influence, muſt feel the greateſt efficacy of his ſcorching heat. And ſince the gravitation of the ſun raiſes exhalations and noxious vapours out of the earth, and rarified air being the ſole cauſe of putrefaction, ſuch countries muſt of courſe be very fatal to ſtrangers. Thus all the rays of light, both of emiſſion and reflection take the ſhorteſt diſtance poſſible; making the angle of incidence always equal to that of reflection; which ſhews that the works of divine intelligence are not only ſimple, eaſy, and comprehenſive, but diſplays a beautiful harmony throughout the whole. May the golden beams of celeſtial truth, penetrate the ſoul of atheiſm, and rouſe the minds of thoſe who are ſlaves to ſtupidity and ignorance, to the divine pitch of ſeraphic devotion; and illuminate the narrow conſcience of infidelity, with light ineffable, and extatic love.

SECTION

SECTION III.

OF THE

EARTH'S FIGURE.

THE ſpacious volume of creation lies open for man's inſpection, wherein he may trace from a blade of graſs to the blazing ſun in the firmament of heaven; the exuberant goodneſs and intelligent hand of his bountiful creator: But let not vanity eclipſe his judgement ſo far, as to imagine that all things in this magnificent theatre, were created for his ſake alone, to ſatiate his craving appetite, and voluptuous inclinations: No, all things are members one of another, like a piece of perfect machinery; the man cannot ſay to the woman, I have no need of thee; nor again the woman to the man, I have no need of you: There is not one part of creation ſupernumary to another, and each member thereof harmoniouſly coincide to contribute its individuality. The conſtitution of man is ſo complete, that by a proper exertion of his reaſoning powers, he may facilitate his paſſage through life, to the honour of the human ſpecies; leave profitable monuments to poſterity to perpetuate his name; and die to the glory of God.

Both the animate and the inanimate ſyſtem of creation, hang upon the indiſſoluble chain of natural generation, and mutual attraction; and each diſtant ſpecies

ſpecies in the univerſe are dependent on external motives for their preſent ſubſiſtence: Man cannot ſay I have no need of food, neither can that food reply, I grow ſpontaneouſly without the cultivation of man: No, were we to neglect the improvements of agriculture, the moſt prolific lands would degenerate to barrenneſs, and of courſe man muſt inevitably periſh. All things are ſo wiſely contrived, as to adminiſter abundantly to the happineſs and advantage of man; and every creature ſo adapted to its native element, as to enjoy portions of comfort and nouriſhment ſuited to its capacity and condition of life; which adequate oeconomy of nature vindicates the omniſciency and power of a ſkilful artiſt, ſuperior to the judgement of men. How frequently are the performances of men improved and made more ſimple to the riſing generation; but the plan of creation admits of no improvement, and the whole face of nature is ſo replete with animal nutriment, as is ſufficient for all the animated ſpecies to participate in her productions, and erect magazines of plenty to ſet forth the munificent hand of the beneficent creator, and ſupport the precarious life of man. It is a great bleſſing however, that we enjoy ſome benefits which no limitations can bound, nor the artificial pride of opulence deprive us of; to this we claim an abſolute poſſeſſion, in proportion to the capacity of our ſouls; even the heavenly truth and love of God, which the devouring libertine can never reliſh, nor the greedy maw of avarice monopolize; with ſuch a glorious truth, I'll combat the whole conclave of atheiſts, and ſoon make the hugeſt of them evaporate like ſmoke.

When we are made ſenſible of the beautiful uniformity of the revolving heavens; we immediately

aſcribe the inveſtigation of the whole to the ingenuity of an almighty power; and ſhould there happen to be ſuch a creature in the univerſe, to deny the veracity of this power, you may ſoon know him, for he will not be half ſo regular even in his moral duties of life, as the planetary bodies are in their courſes; ſuch an eccentric mortal is ſurely the work of chance, I ſhould like to ſee him.

Now, O atheiſt! if thou haſt not a God, be a one to thyſelf, and to thoſe within thine own ſphere of action; ſo ſhall thy amendment of life, recommend thee to the favour of heaven, and if a God be there, he will not exclude thee merely for unbelief. Call in thy reaſon from its wandering peregrinations, and let thy latter end approach with decency to its primitive duſt. It is a pity! ſuch a genius as I behold, ſhould be the ſong of fools, a reformation in him would prove a God indeed.

The perfect work of creation converts the contemplative mind, and ſtrongly fortifies it againſt the allurements of temptation; it is for want of previous conſideration and reſolution, that is the cauſe of our often being plunged into calamitous circumſtances; and if our careleſs and vicious diſpoſitions are not timely corrected by the rules of right reaſon, the purſuit muſt of courſe terminate in irretrieveable miſery. Common ſenſe, reaſon, and humanity, not only threaten us concerning the danger which may befal us, by committing actions contrary to our own conſciences, but the voice of nature every where calls aloud to uſe proper reſtrictions, and informs us, that virtue here is glory hereafter; and while hope agitates the human frame, man cannot live a ſtranger to the gracious callings of ſovereign mercy, nor be totally ignorant of the important duties

ties of moral rectitude, the former may be miſrepreſented by its antagoniſts, and the latter wilfully neglected; but to fix the eternal boundaries of truth, we muſt ſettle it where our reaſon, and the natural inclinations of our ſouls fervently wiſh to have it, and that will be where God is, in which pleaſurable ſituation we ſhall be completely happy, in all our incorporeal powers of contemplation, and enjoy real portions of ſubſtantial bleſſedneſs without a frown.

As we judge of men from their moral deportment and the works they produce; ſo we infer the exiſtence of the deity from the relation we ſtand in to him; and the knowledge we have of the adequate affinity there is in his wonderful works created.—The figure, motion, magnitude and production of the earth, at once diſplay intelligence and art.

That this terraqueous globe of earth and water, which we inhabit, is ſpherical, is demonſtrable from numerous irrefragable proofs, drawn from reaſon, experiment, and obſervation: Were it ſquare, as the vulgar fooliſhly imagine; the elevation or depreſſion of the pole, would be the ſame in all places, when ſailing or walking directly either north or ſouth; but experience teaches, that the pole is elevated or depreſſed, in proportion to the diſtance ſailed or walked from and to the equator. And all high caſtles, towers, mountains, and promontories, gradually diſappearing, and others appearing, as we recede from, and accede to them, is an irrefutable proof of the earth's rotundity.

If the earth were not round, the ſun, moon, and ſtars would appear under the ſame phaſes in all latitudes, riſe and ſet in all places alike, and at the ſame moment of time; but every day's obſervation confirms the contrary of this; for, we ſee the ſun and ſtars

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to riſe in the eaſtern, and ſet in the weſtern hemiſphere, at different times every day in the year ſucceſſively: And admitting that Tynemouth-bar is fifteen degrees weſt longitude from London, there would be one hour difference in their reckoning of time, the ſun would riſe an hour ſooner at London than at Tynemouth-bar, and conſequently, noon at London, would be eleven o'clock at Tynemouth-bar. Moreover, if two ſhips were to ſail oppoſite directions round the globe, they would differ two days in their account, when they met at the ſame place they ſet ſail from; which could not poſſibly happen, were the earth not globular.

Again, were the earth not globular, the eclipſes of the ſun and moon would appear viſible to every ſpectator on different parts of its ſurface at the ſame inſtant of time, and all places would enjoy an equal proportion of day and night, and conſequently no place or climate, colder or hotter than another.—Theſe, with many more cogent arguments which might be produced, conſpire to prove the globular figure of the earth: Such as its circular ſhadow on the moon's diſk in lunar eclipſes, and the degrees of longitude decreaſing from the equator to the pole in a reciprocal proportion as the latitude increaſes.—For in the latitude of ſixty degrees, there only requires thirty miles to a degree; whereas on the equator, there requires ſixty; but if the earth were flat, it would take as many miles to a degree in one place as another. Moreover, every obſervation affirms, that all the celeſtial bodies are globular, which manifeſtly imports, that this earth muſt be ſo.

It is not leſs remarkable then true, that the feathered tribes, and ſeveral other living creatures, build their neſts, and places of retirement in a circular form,

form; which ſhews, that each different ſpecies in the univerſal creation, have an inſtinct impreſt upon them peculiar to their natures. Moreover, no mathematical figure is ſo capacious as a globe, nor more commodious for turning round on an axis, every part of its ſurface being equally diſtant from its centre of gravity.

Illiterate diſputants maintain, that mountains, hills, valleys, and high promontories, hinder the earth's ſpherical roundneſs, this is very true in a phyſical ſenſe, but ſuch ought to conſider, that the higheſt mountain and deepeſt valley on the earth, has no ſenſible adequation to its diameter, and is no more an impediment to its ſphericity, than a pea upon the ſurface of a milſtone, to the ſtone itſelf.

It is evident that the preſent figure of the earth, is the work of immediate creation, by reaſon of its univerſal utility to the human race, and its durable ſubſerviency to the univerſal creation in general.

SECTION IV.

OF THE

EARTH'S MOTION.

OF all creatures in the univerſe, man ſtands higheſt in the ſcale of exiſtence, his natural propenſity for ſocial communication, and free acceſs to happineſs, denote him a fit concomitant of ſociety, and

and the peculiar favourite of God. No creature is more deſirous of longevity, nor more defenſive of ſelf-preſervation, he ſupports the dignity of his character with reſolution and fortitude, examines the principles whereon his eternal happineſs is enſured; keeps his reputation inviolable, till the divine image of the deity appears conſpicious, in the external ſimplicity of his viſage. This implanted in his inmoſt ſoul remains immoveable as a fixed ſtar; then may viperous ſlander ſhoot its ſting, and quixotic miſcreants calumnize him too. When we inſpect the fopperies of life, how inſignificant they are to the ſerious mind, every little folly contaminates the ſoul, and ſwells the imagination with deſponding fear:— Can man behold the mowing ſcythe of death, and not look forward for a better world than this. If atheiſts wiſh for no other happineſs than this world affords, they ought at leaſt to conduct themſelves through it, as to render their lives of the longeſt continuance; but inſtead of doing this, they make of themſelves popular demons of antiquity, and public puppets for vulgar ſouls to laugh at; they draw ſympathy from the man of ſenſe, and ridicule from the ignoramus. Oh! ye maſſy monuments of compound contradictions, no longer tantalize the world with chimeras, but let the love of truth break your adamantine hearts, and view the upright man as an original tranſcript of the great creator.

Of all the immoralities incident to the human race, ebriety is moſt perverting, the prodigal wallows in his choiceſt evils through the prime of life, till he has rendered himſelf a tatterdemalion to a pitileſs world; then he becomes penſioner on the free bounty of God, and obtains a chriſtian name as well as other men. Religion commiſerates his wants, and heavenly

heavenly voices mitigate his grief. Intoxication has ſo prevalent an aſcendency over reaſon, that it inverts all our virtuous deſigns, and makes us generous independents, even in the midſt of neceſſity; but let no man aſcribe ſuch degeneracy to the frailty of Adam; nor impute the cauſe of it to the deity, for it muſt be allowed, that if we are free to do evil, we have a greater freedom to do good; becauſe the latter is adapted to our very conſtitution, and renders us amiable in the ſight of God, to whom we have a near affinity. Every man is ſenſible that guilt is a perſonal crime, and each individual muſt be reſponſible for his own, by reaſon he beſt knows it; therefore the ſin of Adam can no more be imputed to his poſterity, than one man's ſoul can be transferred into another. God is univerſally good to the human race, and though we have not ſuch a knowledge of his attributes as we could wiſh, yet we have ſufficient to fit us for the enjoyments of a better life; and to elevate our conceptions above the artificial policies and vain fabrications of deſigning men. And whenever we have violated that law, which our conſcience holds the moſt meritorious, let us timely ſtir up the vigour and reſolution of our minds, to guard againſt future temptations.

Whatever we do, whether good or evil, it ſhall redound to the honour, or diſhonour of our own ſouls, in the day of final retribution. Dare any man venture to affirm, that God created mankind to ſpeak evil of him, and of each other; if evil be original, and enmity be natural, as many ſuppoſe, then the caſe muſt be ſo; but we thank our great creator that the caſe is not ſo; for all evil is deſignedly and voluntarily committed, and man has ſome darling gratification or intereſt motive in view, which is the

cauſe

cauſe of evil. The evil communications, and bad practices of a few individuals, may ruin millions, and when vice or the nefarious idea of ſuperlative diſtinction, has mortally wounded any party, place, or community, a renovation of parties muſt neceſſarily take place, or a general judgement enſue, in order to reſtore tranquility and mutual benevolence to the virtuous mind. Enmity may ariſe from a variety of unnatural cauſes, intereſt and ſelf-promotion ſeem to be the chief: Would the ambitious man diveſt himſelf of the flattering hopes of precedency and expectance, ſeek his own happineſs at the expence of his own ſoul, by endeavouring to promote it univerſally among his fellow creatures; all diſcord and oppoſition would ceaſe, and the human race alleviate each other's grievances as brethren of one common parent ought to do.

One might naturally expect in this learned world, where every man pretends to be his own philoſopher and prieſt, that atheiſts would meet with the contempt they deſerve, and that their diabolical tenets would be totally diſregarded; but inſtead of this, the very reverſe is the fact. For ocular demonſtration proves, that both the philoſopher and divine, are afraid of the barbarous calumny of thoſe venomous vipers; and that the latter in many caſes even acquieſces with their principles, which are founded on neither faith nor truth: Now, why ſhould a conſcientious whig be intimidated at the ſight of an atheiſt, if his hope be anchorized to the immoveable rock of ages, and his conduct run parallel to his profeſſion? but experience ſhews, that even the ſincereſt whigs ſeldom practically perform a tenth part of the honeſty they collect in their faces. Would religioniſts walk circumſpectly, practice what they believe, and take no notice of the

atheiſts

atheiſt, poor man, he would ſoon come to his ſenſes; but when philoſophy preſents the teleſcope to the religious world, what wonderous ſcenes appear! a numerous variety of creatures all differing in magnitude and conſcience, mere nominal profeſſors to what they do underſtand.

" But ſtill the world (ſo fitted for the knave)
" Contents us not, a better ſhall we have?
" A kingdom of the juſt then let it be;
" But firſt conſider how thoſe juſt agree.
" The good muſt merit God's peculiar care;
" But who but God can tell us who they are?
" One thinks on Calvin heaven's own ſpirit fell,
" Another deems him inſtrument of hell:
" If Calvin feel heaven's bleſſing or its rod,
" This cries there is, and that, there is no God.
" What ſhocks one part, will edify the reſt;
" Nor with one ſyſtem can we all be bleſt."

POPE.

The bleſſings of heaven are not ſpontaneouſly, but carefully and indulgently beſtowed upon thoſe who wiſh to embrace them; God is not confined to any local attachment, or prepoſſeſſion; that he ſhould favour one part of the human race more than another: No, all are the objects of his peculiar care, and admitted to ſhare in the bounties of nature, in proportion to their wants. He is abſolutely impenetrable, yet penetrating all things: He operated upon the chaotic maſs, and brought into faſhionable exiſtence every material world we behold. No finite creature whatever, can make any encroachments upon his unchangeable goodneſs; he is completely perfect,

ſect, and conſequently his omniſciency precludes all abbreviation. He is always impartial, delights in clemency, and is infinitely juſt; can receive no additional happineſs from his creatures, and is tranſcendently happy; requires nothing of them but a continuance in holineſs, without which, no man ſhall obtain heaven. Were we permitted to analize for a century, we would not comprehend the manner how he perceives and knows all things, nor aſcertain a poſitive reaſon why one thing produces another after its kind.

The being and attributes of the deity are not to be ſcrutinized, but to be believed; and though we feign our imagination a million centuries old, yet it has no ſenſible adequation to his eternity: He is not as our fancy wills, nor is his deſigns as vain men would have them, but he is immenſe and the ultimate end of ineffable glory.

Since man is the nobleſt of all creatures in the univerſal creation, and his reaſon freely penetrates from earth to heavenly things, let him cheriſh the inward impulſes of divine grace, which continually puſh him forward to his eternal reſt; ſo ſhall the ſoul immediately forget the ſenſual joys of ſublunary trifles, and participate in more ſolid qualities: The celeſtial rays of happineſs operate in every man, in proportion to the deſire he has for it; and manifeſtly vindicate the happy immortality of the ſoul in a world of future bliſs. The intellectual capacity or ſoul of man, is a perfect copy of its divine creator; whether it ſhall reunite again to its primitive body, after if has performed the duties of this life, has been much diſputed among the literati, but however, the ſcriptures inform us it ſhall, and we ought to believe that

that will defy the most subtle Theologian to explain — a pretty assertion

must we judge of the original by the copy

that book rather than any other, till we are better informed. a pretty argument

But we come now to examine the perfect law of nature, and to inveſtigate the principle by which the planetary bodies are retained in their orbits; according to the Newtonian ſyſtem of philoſophy, the bodies in the univerſe attract each other in the reciprocal dublicate proportion to their diſtances from their central force, therefore the earth muſt move round the ſun, and not the ſun round the earth; for it is as impoſſible for the latter to move the former, as it is for a pea to move a milſtone. This progreſſive circumgyrative motion of the earth about the ſun, is owing to an univerſal principle of gravitation; or influential power being implanted in the material world at the firſt foundation of it, whereby each body and particle of matter in nature, endeavours to draw every other body and particle to itſelf, and the ſtrength of this attraction is always as the quantity of matter in the attractive body, and the ſquare of the diſtance inverſely.

The orbit of the earth about the ſun is not circular but elliptical; the reaſon of which is demonſtrable from the pure principles of geometry; for, all bodies in motion having uniform velocities, deſcribe equal ſpaces, in equal portions of time, receive no additional impulſe during their deſcriptions, are acted upon by a centripetal force directed to a centre; the tendency of the ſaid force is ſpecified above, and is deducible from the property of the ellipſe.

Let an oval be completed, through which draw the tranſverſe and conjugate diameters at right angles to each other, place S. in one of the foci, to denote the ſun or central body; and E. at the extreme diameter of the tranſverſe, to repreſent the earth, or

any

any other projectile body: Now, if you imagine the earth at E. to be puſhed into motion, it would for ever continue forward in the ſame right line, were it not for the efficacy or attraction of the ſun counterbalancing its impulſion, and conſtraining it from that direction, and cauſing it to deſcribe curvilineal ſpaces around him, in times proportioned to its diſtance. In this manner is the whole planetary hoſt of heaven governed and ſupported; and all their various motions and appearances accounted for.

" View thy own world, behold the chain of love,
" Combining all below and all above,
" See plaſtic nature working to this end,
" The ſingle atoms to each other tend,
" Attract, attracted to, the next in place
" Form'd, and impell'd it's neighbour to embrace.
" See matter next, with various life endu'd,
" Preſs to one centre, ſtill the general good;
" All ſerv'd, all ſerving, nothing ſtands alone,
" The chain holds on, and where it ends unknown."

POPE.

The benefits which redound to the human race, from this intrinſic principle of gravitation, are too prolix to enumerate; but thoſe who are ſenſible of ſuch an univerſal union, can neither be a ſtranger to the deity, nor an enemy to man, this heavenly inſtinct infuſed into both the natural and moral worlds, produces ſympathy in the breaſt of a man, and impells him to ſocial communicativeneſs; by which we balance the grievances of the mind, and hold converſe with God. Were it not for the happy effects of a centripetal power, the planets would throw all looſe materials from their ſurfaces, and ruſh into confuſion,

confuſion: But gravity acting againſt the centrifugal force of their rotative motions, preſerves the revolving frame of nature entire. The centrifugal velocity of bodies is greateſt at the poles, becauſe gravity is ſtrongeſt there; the earth being not truly ſpherical, but rather an oblate ſpheroid; whoſe polar diameter is about thirty-eight miles ſhorter than the equatorial. That the earth differs ſomething from a globe is probable, from the vibration of pendulum-clocks gaining time as they approach the poles, and bodies weighing heavier as they recede from the equator

From what has been premiſed, it evidently appears, that gravitation is not eſſential to matter as the atheiſt vainly imagines; becauſe all bodies when once impelled into motion, would for ever continue ſo in ſtraight lines, until they are drawn from that courſe by ſome external agent. Now, it is demonſtrated, that the courſe of bodies being conſtrained from their rectilineal directions, is not owing to the bodies themſelves (for matter has not a ſelf-power to alter its courſe) but to the attraction of the ſun, cauſing and retaining all bodies to move around him in elliptical orbits: All inferior bodies gravitate towards their ſuperiors, and every finite ſubſtance in the univerſe gravitate one upon another. Here an inquiſitive diſputant will naturally aſk, why a ſtone when thrown out of a ſling, or any other projected body, ſhould fall to the earth, and not, according to the above law proceed into the boundleſs regions of infinite ſpace. I anſwer, ſo it would were it not for the gravitating power of the earth, and reſiſtance of the air, the one continually drawing it down from its rectilineal direction, and the other retarding its progreſſive motion. Now ſince all

bodies

bodies projected from the ſurface of the earth, generally move with ſlow velocities, the gravitation of the earth and the groſſer particles of the air near its ſurface, acting more forcibly upon them, than thoſe bodies which have ſwifter velocities; therefore, theſe two external forces, operating upon the impulſion of projectiles, muſt of courſe bring them to their loweſt place of reſt. But if a heavy body could be projected with a velocity, greater than the gravitating power of the earth, the air would have no ſenſible effect upon it, becauſe it would fly with ſuch amazing celerity, as would carry it through this atmoſpheric-air into a non-reſiſting medium, about the ſpace of ſeven ſeconds of time, and there revolve around this earth as the moon doth. It is probable from repeated experiments, that both light and heavy bodies deſcend in vacuum equal ſpaces in equal times; if two heavy bodies, differing in ſolidity, be let fall in any place void of air, they will both arrive at their loweſt place of deſcent in the ſame inſtant of time; which demonſtrates that gravity acts on all bodies alike, the air having a material effect upon both; but more eſpecially on the lighter, becauſe of its approximating to an equal equilibrium with the air itſelf near the ſurface of the earth. All heavy bodies projected or gravitating in fluids, are reſiſted in proportion to their ſuperficies, and not according to their quantities of matter: For if a ſphere and cube equal in ſolidity be projected in a reſiſting medium, at the ſame inſtant of time, with an equal degree of velocity, they will not both arrive at their loweſt place of deſcent at the ſame moment of time. But particular caution muſt be paid to the ſpecific denſities of bodies, and the fluids they move in: For a globe whoſe diameter is equal to the ſide of a cube both moving

moving in an incomprehenſible fluid, the former will meet with but half the reſiſtance of the latter. And univerſally all bodies moving in a fluid, are reſiſted in proportion to the ſurfaces of their ſections that cut it.

The whole ſcheme of nature ſeems totally founded upon the inviolable law of gravitation, and the beautiful arrangement of bodies in the planetary ſyſtem, having ſo determinate analogy to one another, irrefutably prove the omniſciency of an almighty power. There is a more accurate adjuſtment in the diſtances of the celeſtial bodies, being adequated to their quantities of matter, than we poſſibly can diſcover; and carefully inſpecting the ſimplicity of the whole, afford us a convincing argument for ingenuity and art.

This globe, as well as the reſt of the planets, gyrates upon its own axis, once every twenty-four hours, at the amazing ſwiftneſs of about one thouſand and forty-five miles an hour; and at the ſame time * performs its annual revolution around the ſun, that enlivening body; the centre, ſource, and ſoul of the univerſe. If the atheiſt will be ſo good as to look up to the heavens, he will ſee the whole accoutrement thereof, rolling from eaſt to weſt; which proves that the earth muſt move the contrary way from weſt to eaſt; as when a perſon is ſitting in a ſhip, and ſailing upon a calm ſea, he ſees the land receding from him at the ſame rate the ſhip ſails, and yet cannot perceive the motion of the ſhip; the ſame is to be obſerved with reſpect to the rotation of the earth upon its axis, without the leaſt movement of the heavens.—

But

* The progreſſive motion of the earth around the ſun is about ninety-one thouſand miles an hour.

But this vis inertia as Sir Iſaac Newton terms it, is very conſpicious in a veſſel full of water, being ſuddently puſhed into motion, upon a horizontal plane, at the commencement, the water will ſeem to move contrary to the motion of the veſſel; whereas there is not in reality any motion communicated to the water, it being abſolutely at reſt in the veſſel; but if the veſſel be ſuddenly ſtopped, the water will endeavour to retain the motion of the veſſel. But there is a progreſſive preceſſion, or ſlow motion forward of the equinoctial points of the earth, of about fifty ſeconds annually, occaſioned by the joint forces of the ſun and moon upon its prominent parts; which is alſo the ſole cauſe of the alteration of the ſtile.—For the julian year conſiſting of 365 days 6 hours, and the ſolar of 365 days, 5 hours and 49 minutes, makes eleven minutes difference yearly, amounting to eleven days in the ſpace of 1430 years. And in order to reconcile the ſolar year with the julian account, we multiply 5 hours 49 minutes by 4, which gives nearly one day to be added to the end of February every fourth year, called leap year.

SECTION V.

THAT THE

EARTH IS NOT ETERNAL;

NOR AROSE FROM CHANCE.

THE great omnipotent creator of the univerſe, has ſo ſkilfully conſtituted the frame of man, that

that he is capable of receiving any impreſſions, and of perceiving and retaining ſuch glorious truths, as are calculated to mollify his diſpoſition, and promote the felicity of his ſoul through every period of its exiſtence. And as ſoon as philoſophy, the eternal monitor of the deity, inſtils its primitive facts into the mind; the fictions of time are immediately exterminated, and the ſplendid images of pagan idolatry not only rendered reputeleſs, but dwindle in the eye of reaſon like a ruſh-light in the beams of the meridian ſun.

Where, and when idolatry firſt originated, is hard to trace, nor can we expect any plauſible account of it from the heathen philoſophers; becauſe they had no idea of its deception; all therefore that is to be gathered from them, is only a deſcription of their gods, and their manner of worſhipping them. But however, if we carefully inſpect the writings of ſacred hiſtory, we ſhall find it firſt commenced in Chaldea, near the time of Abraham's marriage, which might be according to the ſymbols of time uſed by Moſes, about the fourth century after the flood. And it appears evident, that it ſtrongly infatuated the minds of the people in the days of Joſhua; from the plain enumeration he gives of the idolatrous proceedings in various countries. Diodorus Siculus of Sicily, informs us, that when the moſt ancient inhabitants of Egypt, beheld the regular courſe, riſe and progreſs of the heavenly luminaries, they were ſtruck with ſuch profound admiration, as to imagine the ſun and moon to be the firſt gods, the former they called Oſiris, and the latter Iſis. The conſtant revolutions of theſe ſydereal deities, taught the Egyptians when to manage their moſt important affairs, particularly the ſeed time and harveſt; and if a favourite friend

lay at the point of death, when both their gods were abſent, they deemed their prayers hopeleſs: Which frequently happening, they invented images or ſtatues to the honour of their abſent gods, to the ſun, golden ones, to the moon, ſilver; and ſo they divided the metals among the ſtars and planets; they then built* chapels or temples, and placed the images in them.

How mortifying is, and has been, the groſs ſtupidity of man in every age of the world, and what a powerful effect ſuperſtition has upon the minds of the vulgar even in the preſent day; but the time is certainly faſt approaching, when all the pagan deities ſhall be converted into their proper uſes, and a genuine knowledge of the only true God be planted in the human ſoul. The people of Egypt were certainly the moſt ignorant and unnatural wretches imaginable; they not only worſhipped the images of bulls, cows, calves, reptiles, and things of the meaneſt deſcription; but even conſecrated a crocodile, a ſerpent, or a cat, and things of the moſt contemptible nature, to baniſh their fears and corroborate their hopes. The gradual extirpation of thoſe enormous ſuperſtitions, and beſtial impurities out of the world, and the improvement of virtuous knowledge, prove, that it has not exiſted from all eternity of itſelf, in the preſent ſtate we now behold it. This dangerous degeneracy of the ancients, the laborious part of mankind has ever ſtrenuouſly endeavoured to expunge; and diſcucidated the matchleſs goodneſs of the ſupreme deity to the comprehenſion of the meaneſt clown, whoſe ſpotleſs purity ſhines conſpiciouſly in the virtuous mind.

But

* The moſt ancient we have upon record, is that of Paleſtine or old Canaan, called Baalzebub.

But the preſent ſyſtem of arts, ſciences, and morality, indicate that the earth has not been of long duration; for the mathematical ſciences have gained more improvement theſe two centuries laſt paſt, then all the centuris before on ancient record, which is not owing to the policy of ſtateſmen, but the induſtrious enquiries of the ingenious mechanic; had theſe ſciences met with ſuch rapid improvement in early ages, they would long ere now been brought to a far greater perfection. There has not been wanting in every age of the world, ſince the commencement of time, ſcientific men to calculate and propagate the ingenious arts, thus ingenuity ſhall flouriſh, and ſociety venerate the inventions of laborious man.

Philoſophy the higheſt attainment of man, and the conquering attribute of heaven, transfuſes irreſiſtable truths through every faculty of the ſoul, and calmly navigates it through its primitive voyage of life; no tempeſt can alter its courſe, nor obſtructions impede its progreſs.

The epicurean atheiſt may boaſt of the mighty huſtle, and confuſion of material atoms, ſwelling and dancing into worlds, which is altogether incongruous to reaſon, and entirely unphiloſophical; but the wiſdom of God in creation, ſhall be my theme while nature ſprings for joy; it is this inſtructs me in the real duties of life, how to live and die, and kindly leads me to the fountain of truth. The ſubſtance of the epicurean philoſophy or an article of the atheiſt's creed, is this, that an infinite variety of extremely ſmall and hard particles of matter have for ever been; and that thoſe little atoms or particles after innumerable ſkirmiſhes with each other, in the immenſe void, did at laſt compoſe the univerſe as we now behold it: How laughable is this groſs abſurdity; for

man

man who is the nobleſt creature in creation, is not endowed with ſelf-exiſtence, much leſs inanimate matter; but allowing the atheiſt his atoms, how came they to produce different worlds, that they did not cement into one ſolid maſs? and indeed it is merely impoſſible they could produce any world at all, becauſe, ſolid hard particles of matter floating in a void ſpace, will not cohere, but always repel each other with the ſame velocity they met. Every child knows that if any two hard infrangible bodies (as two ſtones) are made to ſtrike one another, they will rebound; conſequently it appears from the real principles of philoſophy, that the epicurean hypotheſis is abſolutely erroneous.

The atheiſt alſo ſtrenuouſly maintains, that the univerſe might have been mechanically modelled; but this is philoſophically impoſſible, becauſe matter has no property of intelligence eſſential to it; for if a globular body be placed upon a horizontal plane, it will not move till it receive ſome external impulſe, and when in motion, it will proceed for ever forward in a right line, continually increaſing, but the motion of the earth in its annual orbit is continual and uniform, which is not owing to any property eſſential to the earth, but wholly to the principle of gravitation, or, a centrepetal force; conſequently motion is not eſſential to the body in the former caſe; becauſe it moves from an external impulſe; nor to the earth in the latter, by reaſon its annual revolution is dependent on the invariable law of gravitation, which is a principle neither eſſential to matter nor motion.

Again, it is impoſſible for the earth to have been from all eternity of itſelf in the ſtate we now behold it, becauſe it not only required an external impulſe to puſh it into motion in the direction of a tangent;

but

but alſo a motive cauſe acting upon, and ſupporting it in the planetary ſyſtem. What power the almighty creator exerted to continue the motion of the former we know not, but we are not altogether ignorant to what occaſions the latter. Had it not been for the conſtraining influence of this ſecondary cauſe, or the action of the ſun, the celeſtial bodies would have moved in ſtraight lines parallel to one another, and thereby produced no viſible change in the heavens.

Now every body knows that there are eclipſes of the ſun and of the moon, every year, which could not poſſibly happen, did not the orbit of the moon croſs the orbit of the ſun in two points called the nodes, making an angle with each other of about five degrees, near which when the moon approaches, there is commonly an eclipſe of the ſun.

From what has been advanced, it is apparently obvious, that the earth and the reſt of the planets are not only retained in their elliptical orbits by attraction, but alſo depend one upon another, like a piece of perfect machinery, which manifeſtly infer the omniſcient intelligence of an almighty power. But this earth is tending to a diſſolution, for the perſevering energy, or gravitation of the planets one upon another, will in proceſs of time, make a ſenſible alteration in their planes of interſection; the joint force of Jupiter and Saturn on the earth, to change the plane of the equinoctial, as eſtimated from a mathematical computation, is not leſs than one minute in about three centuries and a half; conſequently in a few centuries hence, the equinoctial plane muſt fall into the ecliptic, and thereby totally deform the preſent face of things. Sir Iſaac Newton, in his book of obtics, ſeems to confirm the above opinion; he ſays, that

that the ſmall inequalities of the planets muſt continually increaſe by ſlow degrees, till they render at length the preſent frame of nature unfit for the purpoſes it now ſerves. This is a moſt powerful confutation againſt atheiſm, and an irrefragable proof, that this earth is not intended for eternal duration.

Nothing is more dangerous to man, nor has any thing a greater tendency to invalidate his reputation, than the illiterate maxims of heathen philoſophy; there is not a ſingle propoſition in the epicurean ſcheme, will either ſtand the teſt of a mathematical demonſtration, or correſpond with the operations of nature, therefore the ſooner ſuch a heterogeneous maſs of diſingenuous corruption is buried in the ruins of oblivion, and the invaluable precepts of the Newtonian philoſophy inſtilled into the human breaſt, as leading principles of true religion, the better; here nature, reaſon, and the mathematics conjointly agree, and infuſe eternal life into the enquiring mind.—There is no deception in this, ſimplicity is joined with truth, and nature as ſhe ſings, inſtructs her children in the glorious hymns of heaven. Inſignificant and obſcure are the various ſyſtems of ancient philoſophers, each different ſect mightily endeavoured to maintain their own opinions, and what reaſon could not comprehend, they deemed impoſſible. They laid down maxims contrary to truth, which led to concluſions repugnant to the uniform laws of nature; their poſtulates were as hard to underſtand, as the propoſitions they were to be applyed. Thus, the epicurean ſect laboured falſely, to make the world believe, that the univerſe originated from a chaos by the mere laws of mechaniſm, this notion they imbibed, by aſſuming ſelf-exiſtence and intelligence to lifeleſs matter, which wore a plauſible aſpect, till God

ſaid

ſaid, let Newton live to diſpel the figments of opinions, and ſhew deceitful man, that the planets rolling in elliptical orbs, are entirely above the mere laws of mechaniſm. To trace nature to her remoteſt facts, we muſt begin with ſomething ſimilar to the effect preceding, and by a regular ſucceſſion of invariable effects, we ſhall as ſafely aſcertain the primitive cauſe, as that a ſtorm will be followed by a particular calm. Thus different degrees of heat and cold, produce ſimilar degrees of ſenſation in the animal frame, the vibrations of a muſical inſtrument have a ſimilar ſound, according to the ſtate of the atmoſphere; the revolutions of the luminaries, is the natural conſequences of theſe effects; and gravitation preſerving the ſyſtem of nature entire, is the conſequence of all. Guilt produces fear, and fear begets torment, which will perpetually remain with the ſoul, if a reconciliation is not made with the deity in this world.

By proper methods of reaſoning, we unfold the ſecrets of nature, and find from repeated obſervations, that the motion of the earth is accelerated and retarded, according as ſhe accedes to, and recedes from the ſun; that ſhe gains at one time what ſhe loſes another, vice verſa, and deſcribing equal ſpaces in equal times; lead us to enquire on what principle of geometry this is founded; and from a few moments reflection we find, that it is founded on the elliptical curve; no other mathematical figure having that property; hence we juſtly conclude, that the moon revolving about the earth, and the planets moving round a common centre of gravity, retain the ſame law. Every heavy body projected, muſt deſcribe a certain trajectory or figure; having a ſimilar analogy to ſome known propoſition in the higher geometry, whoſe particular limitation is determinable from

from thence, and the time of deſcription deducible from the geneſis and property of the figure, or trajectory. If the earth were to revolve upon its axis, with a ſufficient degree of velocity, as to throw all bodies from its ſurface, they would deſcribe ſimilar and concentric ellipſes about it, whoſe circumferences and elliptical periods are to be collected from the given celerity the earth moves with at the time of projection.

The regular ebb and flow of the ſea, alſo lead us to enquire from what cauſe they originate, and from ocular obſervation, we are well aſſured, that the tides are always higheſt about a day or two after the new and full moon, or when ſhe is in conjunction and oppoſition with the ſun, which happening preciſely twice every month, prove that theſe two luminaries conſpiring together, are the ſole cauſe of raiſing the waters: But there are alſo neap tides twice every month, conſtantly agreeing with the moon, when ſhe is in her firſt and laſt quarters, which proves, that the action of the ſun is abated, and that the waters are only acted on by the difference of their forces; there being nearly twenty-nine days and a half between one new moon and another; and conſequently twelve lunations or new moons in 354 days, being eleven days leſs than one ſolar year, or annual revolution of the earth. We are again led to conſider what Euclid our leading geometrician means, when he informs us, that a line has length but no breadth; this definition cannot be explained by conſulting the artificial delineations of man; for every line we draw muſt have both length and breadth. But if we apply to the divine plan of geometry, as delineated in the grand ſyſtem of creation, a ſatisfactory ſolution to this definition immediately ocurs,

occurs, for though the earth in its annual orbit, deſcribes no viſible line in the heavens, yet it is certain that the length of its path is of a limited and determinate nature. Or, as when a bullet is projected out of a cannon, it deſcribes in the air what geometers call a parabola, whoſe length we approximate from the horizontal rage of the bullet, and the velocity with which it is projected. Now ſince there is no viſible appearance of its path, conſequently a line has a determinate length, but no breadth. A point is to be underſtood after the ſame manner, as the croſſing or interſecting ſuch lines.

But this earth is not only haſtening to a diſſolution, but alſo the ſun itſelf, for the earth attracting the rays of the ſun in perpendicular directions to its ſurface, which never more return to their original fountain, will in a ſeries of years quite diminiſh the ſubſtance of that glorious luminary. Other cogent arguments might be enumerated to prove that this earth is not intended for eternal duration; but they are too copious for the limits I have preſcribed to myſelf in this work; I ſhall therefore carefully reſerve them till another opportunity. May the atheiſt live a life of exemplary virtue; look with a glorious diſintereſtedneſs on the prepoſterous trifles of the world, and riſe ſuperior to the ſilly vanities of momentary pleaſures, then ſhall he die victoriouſly to the glory of God, and not a coward to be the proverb of men.

FINIS.

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